

FINAL REPORT



EDUCATION AND AWARENESS  
PROTECTION PARROTS ENDEMIC  
(White cockatoo, Chattering lory and Violet-necked lory)  
In North Halmahera, West Halmahera  
and Ternate City  
NORTH MALUKU PROVINCE

KONSERVASI ALAM MALUKU UTARA



## FOREWORD

Following and observing the growth in exploitation of biodiversity in North Maluku, and especially of Parrots, gives cause for concern that within 10 to 20 years, if there is no firm action by Government, it is not impossible that Parrots such as the White Cockatoo, *Cacatua alba*, Chattering Lory, *Lorius garrulus* and Violet-necked Lory, *Eos squamata* will suffer a drastic decline in population and that the threat of extinction will be ever greater.

Konservasi Alam Maluku Utara (Nature Conservation North Maluku, KAMU) expresses our thanks to OBC for its continuing support for conservation in the Oriental region, including Indonesia, through the making of small grants to assist conservation actions by community groups and NGOs. In this case the grant has supported the continuation of on-going efforts for the conservation and protection of the region's endemic and threatened Parrots.

Our hope is that in future, the support of OBC can be continued so that the planned follow-up to the surveys reported here can be implemented. Our intention is that we can work step-by-step towards the resolution of conservation problems in Maluku Utara, and for this we need continued support from donors. With continued action the commitment that has been created amongst all stakeholders through this project will bring lasting benefits for conservation.

Ternate, April 2014

Konservasi Alam Maluku Utara

ISKANDAR HI ABDULLAH

Chairman

## TABLE OF CONTENTS

FOREWORD .....	1
TABLE OF CONTENTS .....	2
EXECUTIVE SUMMARY .....	3
INTRODUCTION .....	5
SECTION I. ACTIVITIES .....	7
<b>A. EDUCATION</b> .....	7
1. Pre-test. ....	8
2. Presentation of education material, question and answer session .....	11
3. Sharing of Stickers and Brochure .....	14
4. Presentation of an 'EX Banner' .....	14
<b>B. DATA GATHERING ON PARROT TRAPPERS AND TRADERS</b> .....	15
1. Collection of initial data on Parrot trappers and traders .....	15
2. Collection of data on Parrot trappers and traders .....	15
<b>C. INTERVIEWS WITH PARROT TRAPPERS</b> .....	16
SECTION II. RESULTS .....	17
A. EDUCATION .....	17
B. DATA ON PARROT TRAPPERS .....	18
C. TYPES AND SPECIES OF PARROTS TRAPPES .....	19
D. DISCUSSIONS WITH PARROT TRAPPERS .....	20
SECTION III. FOLLOW UP .....	22
SECTION IV. CONCLUSION .....	23
ATTACHMENT IMAGE .....	23

## EXECUTIVE SUMMARY

The threat of loss of biodiversity, specifically the threat to the endemic Parrots of North Maluku found in the Halmahera island group (Morotai, Halmahera, Bacan, Kasiruta, Mandioli, Obi) and a number of small islands to the west of Halmahera, is increasingly out of control. Trapping takes place for birds to trade and to keep as a hobby, and mainly affects White Cockatoo (*Cacatua alba*), Chattering Lory (*Lorius garrulus*), Violet-necked Lory (*Eos squamata*) and Eclectus Parrot (*Eclectus roratus*).

Konservasi Alam Maluku Utara (Nature Conservation for North Maluku, KAMU) is a local NGO which works to protect and conserve biodiversity and the environment, in particular wild species and their habitats, by raising the awareness amongst the public about the importance of biodiversity for the future. Towards the end of 2013 KAMU carried out the following activities with the support of OBC (Oriental Bird Club); (1) Education activities in Primary, Junior and High Schools, (2) Compilation of data on bird trappers and traders (3) Discussions with bird trappers, and (4). Awareness-raising with the community. The activities were done to find out:

1. The level of knowledge of school children about Parrots.
2. The number of Parrot trappers and traders.
3. The causes of the continuing trapping of Parrots.
4. The level of awareness of the community about protection of Parrots.

Ten schools were visited during the education activities, consisting of three primary schools, four junior schools and three high schools in North Halmahera District, West Halmahera District and Ternate City. Of the 478 school children who participated, 70 (15%) recognised Parrots and could write their names in Indonesian, while 261 (55%) recognised Parrots and could write the names in local languages, 147 children (31%) did not recognise any Parrots,

and in particular where not familiar with the three species that are endemic to North Maluku, White Cockatoo, *Cacatua alba*, Chattering Lory, *Lorius garrulous* and Violet-necked Lory, *Eos squamata*.

Data was gathered from interviews with twenty-four bird trappers, comprising 19 active trappers, 5 passive trappers, and 2 passive traders, located in 9 villages in 5 sub-districts in West Halmahera District. The species they trap are White Cockatoo, *Cacatua alba*, Chattering Lory, *Lorius garrulus*, Violet-necked Lory, *Eos squamata* and Eclectus Parrot, *Eclectus roratus*.

The estimated total number of birds trapped over a year by four trappers who depend on routine trapping activities as a source of income, and 15 trappers who only go trapping when they have an order or request from a customer (average once every 3 months) was 312 individuals of White Cockatoo, *Cacatua alba*, 2,340 individuals of Chattering lory, *Lorius garrulus*, 1,560 individuals of Violet-necked-lory, *Eos squamata*, and 780 individuals of Eclectus parrot, *Eclectus roratus*.

Based on discussions with the trappers, a possible way to stop or reduce the level of trapping is to provide assistance to trappers to enable them to provide for their families through alternative income sources. This could include providing farming equipment or other equipment which could support the household.

## INTRODUCTION

North Maluku Province consists of a string of islands which stretch from Morotai in the North to Taliabu in the South, and from Gebe Island in the east to the Batang Dua islands in the West. The region has 14 species of Parrot, nine of them found on Halmahera and associated islands, five on the Sula Islands, six on Gebe. Among the 14 species, four are endemic to North Maluku, three are protected by law and two are classified as threatened by IUCN. The 14 species are: Sulphur-crested Cockatoo (*Cacatua galerita*), White Cockatoo (*Cacatua alba*), Chattering Lory (*Lorius garrulus*), Eclectus Parrot (*Eclectus roratus*), Great-billed Parrot (*Tanygnathus megalorhynchus*), Blue-backed Parrot (*Tanygnathus sumateranus*), Moluccan King Parrot (*Alisteorus amboinensis*), Red-cheeked Parrot (*Geoffroyus geoffroyi*), Red-flanked Lorikeet (*Charmosyna placensis*), Moluccan Hanging Parrot (*Loriculus amabilis*), Sula Hanging Parrot (*Loriculus sclateri*), Golden-mantled Racket-tail (*Prioniturus platurus*), Violet-necked-lory (*Eos squamata*), Citrine Lorikeet (*Trichoglossus flavavoridis*).

Global analysis of bird distributions has identified the Halmahera islands (Morotai, Halmahera, Bacan, Obi and the small islands to the west of Halmahera) as a hotspot for biodiversity. This archipelago ranks tenth amongst 218 biodiversity hotspots globally, with 27 endemic birds including the three endemic Parrots of Halmahera, *Cacatua alba*, *Lorius garrulus* and *Loriculus amabilis*.

The biological richness of North Maluku, and especially the three endemic Parrots, is still the subject of hunting for trade. The existence of this large scale exploitation is an indication of the ineffectiveness of the quota system for regulating the trapping and trade of wild animals, as defined by Law Number PP 8/1999 (on Exploitation of Plants and Wildlife). In addition, the endemic White Cockatoo, *Cacatua alba* and Chattering Lory, *Lorius garrulus* are still not protected by Indonesian law, and can thus be trapped, sold, domesticated, transported out of

Maluku and even smuggled to neighbouring countries without any sanctions against the perpetrators.

The fact is that trapping of Parrots is still going on, driven by two factors; (1) as a source of regular income, and (2) as an additional source of income in times of need. Of the two factors, trapping as a source of additional income dominates. One underlying cause is the farming system in the area, which still depends on manual labour, which limits the ability of farmers to maintain their rice, corn and ground nut crops, which in turn reduces the harvest, and produces an income that is sufficient for basic household needs, but inadequate to cover one-off needs such as children's education. In these circumstances parrot trapping is to provide additional income to fulfill these one-off needs. Trapping may also be done because there is an order, typically from a civil servant/government official, or a member of the armed forces or the police who has completed their tour of duty and wants to carry Parrots as a souvenir to be given to friends, family and superiors back home.

Bird trapping as a regular source of income – as a 'profession' – is only carried out by a few people, but because of the intensity of their activities, they make a disproportionately large contribution to the total catch of parrots. Trading of Parrots is to local destinations, as well as to outside North Maluku and sometimes through the islands of Miangas and Sangihe Talaud to Davao in the Philippines.

During this project the team found that the public has very limited knowledge about the endemic Parrots of the region. This is because the dissemination of information on the environment, from Government or other institutions working on conservation, for the public generally or even within educational establishments (primary, junior and secondary schools, Universities), is very limited. Data and information can be communicated through education activities, awareness raising, and distribution of leaflets, brochures, and discussion.

## SECTION I: ACTIVITIES

### A. EDUCATION

Education activities were carried out with the objective of disseminating information on parrots and their status and distribution, and also to find out about the level of knowledge of school children about Parrots (Lorays and Cockatoos) endemic to North Maluku, using either Indonesian or local names. The material presented to the schools consisted of: (1) an introduction to the diversity of birds in Indonesia and in North Maluku province, (2) the names of Parrots found in North Maluku,, (3) showing pictures of the Parrots found in North Maluku, (4) Data on the population of three Parrot species, based on the reports of Frank Lambert (1992) and, as a comparison, the results of the White Cockatoo survey carried out by Burung Indonesia in 2010, (5) Data on the level of trapping and trading Parrots as reported by Frank Lambert (1992 and ProFauna with KAMU (2003), (6) the types of threats facing Parrots. The material was presented as a PowerPoint.

The activities were carried out on 15 and 16 November 2013 in North Halmahera District, 1 February 2014 in Ternate City, 7 and 8 February 2014 in Ibu and Jailolo sub-districts, West Halmahera District. The schools visited were as follows:

1. Gamsungi Inpres Primary, Tobelo, North Halmahera.
2. Senter Ibu Inpres Primary, West Halmahera.
3. Negeri 1 Primary, Jailolo, West Halmahera.
4. Negeri 6 Junior School, North Halmahera District.
5. Negeri 7 Junior School, Ternate City.
6. Negeri 1 Junior School, Ibu, West Halmahera District.
7. Jailolo Islamic Junior School, West Halmahera District.
8. Negeri 1 High School, North Halmahera District.



9. Negeri 8 High School, Ternate City.
10. Negeri 1 High School, Jailolo, West Halmahera District.

The activities were originally planned for 12 schools, but two schools (1 primary school in Ternate and 1 High School in Ibu Sub-district, West Halmahera District) cancelled the visit at short notice, having previously agreed. The education activities were delivered in four stages, as follows:

1. Pre-test.

The education activity started with a pre-test to assess the level of knowledge of school children about Parrots in North Maluku. The test consisted of showing the pupils pictures of Parrots – five for primary schools, 10 for Junior schools, and 15 for High Schools. Emphasis was placed on knowledge about the three priority species, White Cockatoo, *Cacatua alba*, Chattering Lory, *Lorius garrulus*, and Violet-necked Lory, *Eos squamata*. The pre-test used an infocus, with each picture shown for about 30 seconds, and children were asked to write down the name on a piece of paper which was provided. After the test the sheets were collected and checked.

- 1.1. Gamsungi Inpres Primary School, Tobelo.

Of 69 children and teachers who took part in the pre-test, with five



questions, 42 (61%) knew the local name

of one or more Parrots, 12 (17%) knew the Indonesian name, while

15 people (22%) did not know the names of any species.



- 1.2. Senter Ibu Inpres Primary School, West Halmahera

Of 86 children who took part in the pre-test, with five questions, 47



(55%) knew the local name of one or

more Parrots, 15 (17%) knew the Indonesian name, while

24 people (28%) did not know the names of any species.



1.3. Negeri 1 Primary School, Jailolo, West Halmahera

Of 40 children who took part in the pre-test, with five questions, 22



(55%) knew the local name of one or more

Parrots, 3 (8%) knew the Indonesian name, while 15 people (38%) did not know the names of any species.



1.4. Negeri 6 Junior School, North Halmahera

Of 47 children who took part in the pre-test, with ten questions, 21



(45%) knew the local name of one or more

Parrots, 10 (21%) knew the Indonesian name, while 16 people (34%) did not know the names of any species.



1.5. Negeri 7 Junior School, Ternate City

Of 34 children who took part in the pre-test, with ten questions, 20



(59%) knew the local name of one or more

Parrots, 2 (6%) knew the Indonesian name, while 12 people (35%) did not know the names of any species.



1.6. Negeri 1 Ibu Junior School, West Halmahera District

Of 48 children who took part in the pre-test, with ten questions, 31



(65%) knew the local name of one or more

Parrots, 5 (10%) knew the Indonesian name, while 12 people (25%) did not know the names of any species.



1.7. Jailolo Islamic Junior School, West Halmahera District

Of 44 children who took part in the pre-test, with ten questions, 26



(59%) knew the local name of one or more

Parrots, 5 (11%) knew the Indonesian name,

while 13 people (30%) did not know the names of any species.



1.8. Negeri 1 High School, North Halmahera

Of 48 children who took part in the pre-test, with fifteen questions,



22 (46%) knew the local name of one or

more Parrots, 3 (6%) knew the Indonesian name, while 23 people

(48%) did not know the names of any species.



1.9. Negeri 8 High School, Ternate City

Of 20 children who took part in the pre-test, with fifteen questions,



13 (65%) knew the local name of one or

more Parrots, 5 (25%) knew the Indonesian name, while 2 people

(10%) did not know the names of any species.



1.10. Negeri 1 High School, Jailolo, West Halmahera

Of 42 children who took part in the pre-test, with fifteen questions,



17 (40%) knew the local name of one or

more Parrots, 10 (24%) knew the Indonesian name, while 15 people

(36%) did not know the names of any species.



## 2. Presentation of education material, question and answer session

The second session involved the presentation to the pupils and teachers. Some of the comments and questions from the audience were as follows:

### 2.1. Gamsungi Inpres Primary School, Tobelo.

Krisno (pupil): how can birds that have been trapped and domesticated be returned to the wild?

Bayu (pupil): why do people trap birds?

Mrs Atalia Koloba, (School Head), conveyed thanks for the presentation and commented that it is very important because it enables the pupils to learn about the endemic fauna of their own area, specifically the Parrots.

### 2.2. Senter Ibu Inpres Primary School, West Halmahera

Ratu Balqis Ibrahim, (pupil) Why doesn't the Government protect the Cockatoo?

Zulfikar Ishak, (pupil) How long do birds incubate their eggs?

Mutia M Abdullah, (pupil) Why do birds have to be protected?

Ananda Puteri, (pupil) How can we protect these birds?

Nabila Nasu, (pupil) Why is it not allowed to keep Cockatoos at home?

Puteri M.S Talib, (pupil) Who forbids people from trapping birds?

### 2.3. Negeri 1 Jailolo Primary School, West Halmahera

Sarif, (pupil): Why are the Lorys and Cockatoos threatened with extinction?

M. Qadif, (pupil): Why are the Lorys and Cockatoos often trapped and sold?

Nurain Hajija, (pupil): If Lorys or Cockatoos are trapped, what will happen?

### 2.4. Negeri 6 Junior School, North Halmahera

A. Rorano (teacher): Birds live in the wild, and are very difficult to breed successfully in a cage.

Ria (pupil): do Lorys and Cockatoos breed more quickly in the wild than in a cage?

Delia (pupil): I have two birds. What should I do to release them?

Jainal Baks (teacher) and Mrs Gomuru (teacher): Expressed thanks on behalf of the teachers and pupils of the school for the visit and information, and requested that they be kept informed if there is more information on trapping and selling of birds.

Mrs Thomas Ostentjie (School Head), expressed thanks for this important activity, and requested that the activity be repeated for all the students.

#### 2.5. Negeri 7 Junior School, Ternate City

Randy, (pupil): How can we explain to people who have Lorys and White Cockatoo?

Aji, (pupil): if the Lorys and Cokatoos continue to be threatened, what should we do? Could the Lorys and Cockatoos become extinct?

#### 2.6. Negeri 1 Ibu Junior School, West Halmahera

Defriska Laike, (pupil): Why should Cockatoos and Lorys be conserved?

Fika N. Ronga, (pupil): Why is it only birds that are protected?

Alfans Jaliola, (pupil): Where can we see White Cockatoo in the wild?

Muhrin Saleh, (pupil): Can we keep birds other than Lory and Cockatoo?

Alfaris Muckhsin, (pupil): In addition to trapping and keeping, what other ways are there to protect these birds [sic]?

#### 2.7. Jailolo Islamic Junior School, Halmahera Barat

Zulham Safrudin, (pupil):

(1). Are the birds that are trapped just for keeping? Or for what else?

(2). Where are Lorys and Cockatoos found?

(3). What is the status of Lorys and Cockatoos presently in the forest/wild?

#### 2.8. Negeri 1 High School, North Halmahera

Cakra (pupil): expressed thanks for the visit because it has added to our knowledge of birds, especially Lorys and Cockatoos, including on their population and threats to them.

Dani (pupil): why are only three species threatened with extinction? What can be done to

reduce the risk of extinction of Lorys and Cockatoos? And why are Lorys and Cockatoos also found outside North Maluku and also in other countries?

2.9. Negeri 8 High School, Ternate City

Chairunisa Devika (pupil): thank you the visit of the team from KAMU to our school.

We have learned about the worrying current status of Lorys and Cockatoos. 2.10.

Negeri 1 High School, West Halmahera

Johanis (pupil): what will happen if Lorys and Cockatoos can no longer be found in the wild?

Rahmawati, (pupil): personally, I want to thank the NGO KAMU for coming to the school and sharing a little knowledge about Lorys and Cockatoos, because we would not have known this information without this visit, and our hope is that if there is a book about Lorys and Cockatoos then we hope we can get a copy in order to add to our knowledge.

### 3. Sharing of Stickers and Brochure

Sharing of stickers and brochures was done to reinforce the verbal presentation of material and to encourage greater knowledge and



understanding about the Parrots of North Maluku, with the support of data on population and threats. The sticker acts to spread the message, whilst the brochure contains further information on

Parrots in North Maluku. The sticker and brochure were given to all the pupils and teachers who participated in the education session.

### 4. Presentation of an 'EX Banner'

An Ex Banner was given to the schools where the education activity took place, and in addition Ex Banners were given to the local offices of the Tobelo KSDA (Natural Resource Conservation Agency), which is located in the port in Tobelo. The banner is a display which can be read by pupils and the public. It contains information on the Parrots and appeals to the public to help protect Parrots in North Maluku.

## B. DATA GATHERING ON PARROT TRAPPERS AND TRADERS

Data gathering on Parrot trappers and traders focused on several sub-districts in West Halmahera District, and was carried out from 20 November –10 December 2013. The activity was planned based on initial information from informants. The stages of the activity were as follows:

### 1. Collection of initial data on Parrot trappers and traders (20-25 November 2013).

The strategy used to collect initial data, consisting of the trapper's name, village and sub-district, was to carry out observations at the Jailolo port and ask for this information from people carrying Parrots.

### 2. Collection of data on Parrot trappers and traders

Based on the initial data gathered as described above, visits were made to villages where the Parrot trappers lived as follows:

2.1. Jailolo Sub-district, where one passive trapper, Asril Ludu (Yen), lives at Bukumatiti Village

2.2. Sahu Sub-district, where one active trapper, Agus, lives at Balisoan Village

2.3. Sahu Timur Sub-district, where 6 active trappers live at AkeTola Village (Lucu), Goal Village (Martinus Baru, Isak Baru, Yoksan, Yohanis Bicara), and Golagokusuma Village (Nou) and 1 passive trader, Pius, at Tosoa Village.

2.4. Ibu Selatan Sub-district where there are 7 trappers, 3 active trappers at Sarau Village (Moses Novali, Ananias One, and Calvin Jawa), and 4 passive trappers at Ngawet Village (Bun ILo, Yoab ILo, Kukuwu ILo, Leda ILo).

2.5. Tabaru Sub-district where there are 9 Active trappers, five of them in Tolisaor Village (Oktovian Obe, Yopi Gamumu, Polos Lili, Kristovel Tuluino, Yoskarius) and four at Pasalulu Village (Matias Obe, Lucas Lobo, Gandi Gomuru, Harun Paraud) and one passive trapper also at Pasalulu Village (Bambang).



### C. INTERVIEWS WITH PARROT TRAPPERS

The interviews and discussions with Parrot trappers were done at the same time as collection of data on trapping levels and frequency. The meetings usually involved 2 or 3 trappers, and the difficulty of arranging to meet trappers made it important to get as much information as possible during this one visit. The issues discussed with the trappers were:

- (1). Species and numbers of birds trapped
- (2). Timing and frequency of trapping
- (3). Immediate destinations of trapped birds that are sold
- (4). Solutions to stop trapping

## SECTION II: RESULTS

The activities which were done between October 2013 and February 2014 covered two districts and one city, and included education and awareness, data collection on Parrot trappers, and discussions with Parrot trappers. The results were as follows:

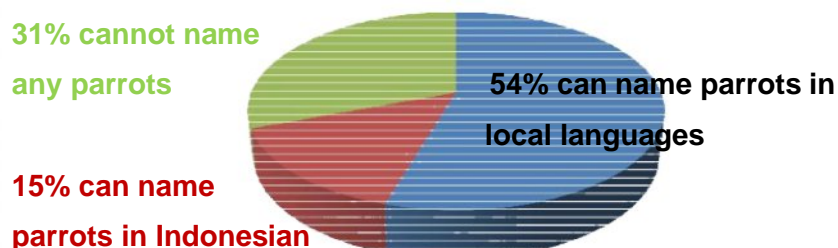
### A. EDUCATION

Ten schools, three primary schools, four junior schools and three high schools in North Halmahera District, West Halmahera District and Ternate City were visited. The results of the test of knowledge on endemic Parrots carried out before the awareness activities was as follows:

1. Of 195 primary school children who participated in the education activity, 111 pupils (57%) knew the names of Parrots in local languages, 30 (15%) knew the names in Indonesian, and 54 (28%) could not name any Parrots.
2. Of the 173 Junior High school children who participated in the education activity in four schools, 98 (57%) knew the names of Parrots in local languages, 22 (13%) knew the names in Indonesian and 53 (31%) could not name any Parrots.
3. At the level of high school, 110 school children from three schools participated in the education activity. 52 (47%) knew the names of Parrots in local languages, 18 (16%) knew the names in Indonesian and 40 (36%) could not name any Parrots.

Overall, in the ten schools visited, out of 478 pupils, 261 (54%) knew the names of Parrots in local languages, 70 (15%) knew the names of Parrots in Indonesian, and 147 (31%) could not name any Parrots (Figure 1)

Figure 1: Level of knowledge of school children on endemic parrots in North Maluku (478 pupils)



## B. DATA ON PARROT TRAPPERS

Data was collected on twenty-four trappers, consisting of 19 active trappers, 5 passive trappers, and 2 traders, living in nine villages in five sub-districts in West Halmahera district. They trap White Cockatoo, *Cacatua alba*, Chattering Lory, *Lorius garrulus*, Violet-necked Lory, *Eos squamata*, and Eclectus Parrot, *Eclectus roratus*.

In addition to the data on Parrot trappers and traders, the team also compiled data on the regular transportation of Parrots from West Halmahera District to Tobelo town (North Halmahera). These Parrots come from trappers in two villages, Tolisaor and Pasalulu, in Tabaru sub-district. The Parrots are carried to Tobelo using a motorcycle taxi (ojeg), a journey which takes one hour and goes through the forest and via the villages of Tolabit (West Kao Sub-district) and Kusuri (South Tobelo Sub-district).

### C. TYPES AND SPECIES OF PARROTS TRAPPED

Based on the results of interviews with the trappers and observation of birds in trappers' houses during visits, the species of Parrot trapped are:

White Cockatoo, *Cacatua alba*

Chattering Lory, *Lorius garrulus*

Violet-necked Lory, *Eos squamata*

Eclectus Parrot, *Eclectus roratus*

The number and species of birds trapped, and frequency of trapping, varied between trappers.

Trappers were divided into Active and passive trappers.

#### Active trappers

These are trappers who rely on trapping as one of their main sources of income. They typically go on two 10-day catching trips a month, trapping between 2 – 25 individual birds.

Table 1 gives estimates of the number of birds trapped by active trappers.

Table. 1. Trapping of Parrots by four active trappers

Species	a. Average number of bird caught per trip	b. Total birds caught in 1 month by 1 trapper (a. x 2 trips)	c. Total birds caught in one month by 4 trappers (b. x 4 trappers)	d. Total birds caught in a year by 4 trappers (c. x 12 months)
<i>Cacatua alba</i>	1	2	8	96
<i>Lorius garrulus</i>	8	16	64	768
<i>Eos squamata</i>	5	10	40	480
<i>Eclectus roratus</i>	3	6	24	288

## Passive Trappers

15 of the trappers interviewed trap only when there is an order for a bird, or wait for the results of the harvest from their farms. They may only go trapping once in three months on average. Table 2 gives an estimate of the number of birds trapped by these trappers.

Table 2. Estimated number of Parrots trapped by 15 Passive trappers

Species	a. Average number of bird caught per trip	b. Total birds caught in 3 months by 1 trapper (a. x 1 trip)	c. Total birds caught in 3 months by 15 trappers (b. x 15 trappers)	d. Total birds caught in a year by 15 trappers (c. x 4)
<i>Cacatua alba</i>	1	1	15	60
<i>Lorius garrulus</i>	8	8	120	480
<i>Eos squamata</i>	5	5	75	100
<i>Eclectus roratus</i>	3	3	45	180

The estimated total number of birds trapped in a year by the 4 active trappers and 15 passive trappers from whom data was gathered is 156 White Cockatoo, *Cacatua alba*, 1,248 Chattering lory, *Lorius garrulus*, 780 Violet necked-lory, *Eos squamata*, and 428 Eclectus Parrot, *Eclectus roratus*.

## D. DISCUSSIONS WITH PARROT TRAPPERS

The estimates of the number of Parrots trapped suggest that trapping remains a serious threat to these species. The discussion with trappers suggested that Parrot trapping is done in response to the household and family needs, and to pay for children's schooling. It is the existence of a market and demand both from the public and from members of the Armed Forces and the police that makes trapping an attractive option. The trappers suggested that

to stop or reduce trapping requires help to find alternative sources of household income. This could involve the provision of farm equipment or other equipment suitable for the local economy.

Specific solutions suggested by the trappers were:

1. Trappers in Tolisaor and Pasalulu villages hope for assistance to get a machine which can shell the ground-nuts that they grow. In these two villages the community including the Parrot trappers plant ground-nuts, but after harvest they have difficulty separating the shell from the nut. They get a very low price for the ground-nuts because they sell them with the shell intact.
2. Trappers in Sarau village suggested that they need fishing boats and engines
3. Trappers in Ngawet village suggested that they needed a machine to grate coconut.
4. The team observed that many of the trappers would benefit from access to credit to enable them to develop small trading businesses.

The trappers proposed that if they were given the support mentioned, they would make a written agreement or commitment not to trap. The agreement would have sanctions and would be made under the authority of the village council, and witnessed by the District Government (Forestry Department), Law Enforcement authorities (Police) and the North Maluku regional office of the Natural Resource Conservation Agency, KSDA. The forestry Department and KAMU would be ready to facilitate such agreements.

### SECTION III: FOLLOW UP

Overall the implementation of the education, awareness and data collection activities was successful. Based on this experience, there are a number of comments and suggestions for follow up which KAMU would like to convey to OBC:

1. The education program for pupils of Primary, Junior and High schools should be continued because it is vital to inform people about the current status of Parrots and future threats. Important target areas for further work would be Morotai, Bacan and Obi Islands.
2. Writing and printing a book titled 'Know the Parrots of North Maluku' ("Mengenai Burung Paruh Bengkok di Maluku Utara") which can be distributed to pupils in schools in the region.
3. Implementation of economic development activities for trappers in villages in West Halmahera such as Tolisaor, Pasalulu, and Ibu Selatan sub-district as an example of how trapping activities can be stopped by providing assistance with farming equipment to increase household incomes. The equipment proposed includes:
  - Machine to shell ground nuts
  - Machine to grate coconut
  - Fishing boats and engines
  - Funding for establishment of small trading businesses

Awareness activities are only one part of the solution to the trapping problem, and may not have a significant impact without being accompanied with support to trappers to change their household economy.

## SECTION IV: CONCLUSION

The education and awareness activities on the protection of Parrots in North Maluku, and specifically White Cockatoo, Chattering Lory and Violet-necked Lory, were successfully implemented and it is hoped that they can play a part in reducing the threats to the populations of Parrots in North Maluku.

## DOCUMENTATION ACTIVITY, DATA COLLECTION AND DISCUSSION WITH TRAPERS

